

Scope of Claims

1. An X-ray detection device for foreign matter (1, 40) which irradiates an examination subject article being
5 conveyed in a conveyance path with X-rays at a predetermined detection position and which determines, on the basis of the transmission amount of X-rays that have penetrated through the examination subject article, whether or not foreign matter is mixed in, characterized
10 in that the X-ray detection device comprises:

a test-piece table (17, 49) which, being outside the conveyance path, holds a test piece (21) for checking sensitivity of detecting the mixed-in foreign matter and which is movably installed so that it can pass the
15 detection position along a moving direction of the examination subject article moving in the conveyance path; and

means (19, 43) for moving the test-piece table along the moving direction at substantially the same speed as
20 a moving speed of the examination subject article.

2. The X-ray detection device for foreign matter according to claim 1, characterized in that:

the conveyance path is provided inside a pipe (7)
25 in which the examination subject article moves, and
the test-piece table (17, 49) is configured such that, in a section of a prescribed length of the

conveyance path including the detection position, the table can move substantially in parallel with the moving direction of the examination subject article.

5 3. The X-ray detection device for foreign matter according to claim 1, characterized in that:

the conveyance path is provided as a moving range for the examination subject article placed on a conveyor; and

10 the test-piece table (17, 49) is configured such that, in a section of a prescribed length of the conveyance path including the detection position, the table can move substantially in parallel with the moving direction of the examination subject article.

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4. The X-ray detection device for foreign matter (1) according to claim 1, characterized in that the means for moving is an elastic body (19).

20 5. The X-ray detection device for foreign matter (40) according to claim 1, characterized in that the means for moving is a motor (43).

25 6. The X-ray detection device for foreign matter (1, 40) according to claim 1, characterized in that the means for moving is an air cylinder.

7. The X-ray detection device for foreign matter (1, 40) according to one of claims 5 and 6, characterized in that:

the moving speed of the examination subject article
5 is arbitrarily settable, and

the moving speed of the test-piece table (17, 49)
is set according to the set moving speed of the
examination subject article.